

TITLE OF INVENTION
Clog Sock

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] Not Applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
DEVELOPMENT

[0002] Not Applicable.

BACKGROUND OF THE INVENTION

1. Field of Invention

[0003] This invention pertains to a foot covering for use with footwear having open heel portions. More particularly, this invention pertains to a sock including a transition of fabric from a lesser thickness for the forefoot portion to a greater thickness along a heel and ankle portion of the sock.

2. Description of the Related Art

[0004] Prior foot coverings include knitted materials worn to cover the toe portion of the foot as a sleeve lacking a heel portion. Typical toe protector socks include seamless or circular knit construction lacking longitudinal extending seams but providing cushioned sole portions in order to reduce chaffing of the skin surfaces of the toes and forefoot. Toe protector socks that lack a heel portion or a heel strap can slid or twist relative to the foot within the user's shoe during walking or running. Prior attempts to reduce sliding or twisting of toe protector socks include use of a heel or an ankle strap extended from the mid-foot portion of

the toe protector sock. The heel or ankle strap may not be aesthetically pleasing to the wearer when toe protector socks are worn with clog shoes or sandals lacking a heel enclosure.

5 **[0005]** Additional foot coverings include leisure wear stockings having a foot portion of knit materials extending between a thick, reinforced toe and heel section, and having a lower leg portion of various patterns of knit materials to provide a decorative effect to the sock leg portion worn by the wearer. Prior leisure wear stockings having a reinforced toe portion may provide crowding and cramping of the toes of a wearer and/or stretching of the forefoot portion of leather clog shoes or sandals having a closed toe portion. Leisure wear stockings having thick, 10 reinforced toe and heel portions may not be aesthetically pleasing to the wearer when the stockings are worn with clog shoes lacking a heel enclosure or sandals having an open toe box, an instep strap, and lacking a heel enclosure.

15 **[0006]** Knit athletic socks are available having a sole portion extended between a toe section and a heel section, with the sole section having internal-facing terry loops to form a cushion within the sock. The cushion layer provides a thicker base portion of the sock compared to the ankle portion and/or the sock portion stretched over the instep. In order to facilitate cooling of the foot while exercising and to encourage evaporation of moisture from the foot, knit athletic 20 socks can include a breathable instep panel adjacent the sole section and positioned around the upper portion of a foot during wear. The instep panel of an athletic sock can be composed of a blend of material that is thinner than the sole portion. Prevalent designs of athletic socks include a thicker material for the toe, sole and heel portions of the sock in order to cushion the foot and to provide long-

life when utilized in strenuous athletic events. The thicker material for the toe, sole and heel portions of athletic socks can provide squeezing or cramping of the toes of a wearer and will induce stretching of the forefoot portion of leather clog shoes or closed toe sandals when athletic socks are worn therewith.

5 **[0007]** Therapeutic socks are available having different knit patterns with varying degrees of thickness and elasticity in order to provide leg muscle support and compression of portions of an ankle or foot that may suffer from pooling of fluids. Typical therapeutic socks include a sole section and an arch section having thick base materials such as terry cloth material. The instep, ankle, and/or leg
10 portions of a therapeutic sock include elastic yarn having a tighter knit that provides greater pressure against portions of the foot, ankle and leg in order to increase the pressure on the foot and limb during walking or running to stimulate venous blood to circulate from the foot to the heart. Thick base materials of the sole and arch sections, and the elastic yarn and tight knit materials of the instep
15 portion of therapeutic socks will induce stretching of the forefoot portion of leather clog shoes or closed toe sandals when therapeutic socks are worn therewith.

20 **[0008]** A concealed sock is available for wearing with boat shoes and dress shoes in order to minimize display of the ankle side portions of the sock. As with typical low-cut socks for shoes such as boat shoes and step-in dress shoes, the concealed sock includes a toe portion and a heel portion of material having a thickness adequate to cushion the foot. An instep portion of the sock includes at least one elastic portion for retaining the instep portion proximal of the wearer's arch and to retain the concealed sock from rising above the low-cut side portions of the boat shoes and step-in dress shoes. Use of a concealed sock having a

reinforced heel portion may not be aesthetically pleasing to the wearer during use while wearing clog shoes or sandals lacking heel enclosures.

[0009] A foot covering is needed that is specifically designed to be worn with clog shoes, slide shoes, mule shoes and/or sandals lacking heels in order to maximize comfort of the forefoot inserted into the shoe and to minimize the stretching of the leather materials of the form-fitting forefoot portion of the shoe. Further, a foot covering is needed that is proportioned in thickness to allow the wearer's forefoot to readily slip into clog shoes, slide shoes, mule shoes, and/or sandals lacking heels while providing warmth for the heel, ankle and/or lower leg portions of the wearer's foot without changing the interior dimensions of the forefoot portion of the clog shoes or sandals lacking heels.

BRIEF SUMMARY OF THE INVENTION

[0010] According to one embodiment of the present invention, a foot covering is provided for enclosing a wearer's forefoot, instep, heel and ankle while wearing footwear lacking an enclosed heel. The sock includes a first fabric layer having respective toe, forefoot, instep and heel portions. The instep portion includes a transition seam circumferentially traversing the upper instep surface. The first fabric layer is composed of a thin elastic material sized to enclose the forefoot, instep and a base surface of the heel portion of the wearer's foot. A second fabric material is disposed to cover an upper surface of the wearer's instep, heel and ankle. The second fabric material includes a leading edge attached to the transition seam on the instep portion of the first fabric layer. The second fabric material includes a thickness greater than the first fabric layer and includes an

ankle portion extended a sufficient length above the heel to encircle the wearer's ankle. The first fabric layer provides a thin layer enclosing the wearer's forefoot, instep and base surface of the heel to minimize stretching of footwear worn with the stock. The thicker second fabric material provides warmth and/or support while covering the wearer's instep, heel, ankle, and/or lower leg while wearing footwear lacking an enclosed heel such as clogs, slides, slippers, sandals, and mule "slide-on" shoes.

[0011] An additional embodiment of the sock includes the second fabric material lacking a heel base portion of thick fabric, therefore the sole portion of the first fabric layer provides a thin covering of the wearer's forefoot extending along the wearer's sole to the sides of the heel. An alternative embodiment of the sock includes a split toe portion of the first fabric layer for comfortable wearing of the sock with thong sandals while providing a thick second fabric material covering the upper portions of a wearer's instep, heel and ankle, thereby providing warmth for the wearer's foot and ankle when wearing footwear lacking an enclosed heel.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0012] The above-mentioned features of the invention will become more clearly understood from the following detailed description of the invention read together with the drawings in which:

Figure 1 is a side view of a medial arch portion of a foot wearing a clog sock of the present invention;

Figure 2 is a front view of a foot wearing the clog sock of Figure 1,

illustrating an upper and a lower portion of the clog sock;

Figure 3 is a side view of an alternative embodiment of the sock of Figure 1;

Figure 4 is a bottom view of a sole portion of the clog sock of Figure 3,
illustrating the overlay of a second layer of thick material extending to encircle the
heel of the sock;

Figure 5 is a perspective view of a foot wearing the clog sock of Figure 3,
illustrating a foot with a clog sock being inserted in a shoe lacking a heel portion;

Figure 6A is a bottom view of an alternative embodiment of the clog sock of
Figure 4, illustrating a toe pocket for wearing with a sandal having a toe thong;

Figure 6B is an outer side perspective view of Figure 6A illustrating the
thick second material covering the wearer's instep surfaces, outer heel and ankle;

Figure 7 is a side view of a clog sock illustrating a second layer of thick
material extended to cover the ankle of the wearer;

Figure 8 is a side view of a clog sock illustrating a second layer of thick
material extending to cover a portion of the mid-calf of the wearer;

Figure 9 is a side view of a clog sock illustrating a second layer of thick
material extending to cover the upper calf of the wearer; and

Figure 10 is a front perspective view of an embodiment for a pair of waist-
length tights having a clog sock foot portion with thick material covering the
wearer's instep surfaces, heel surfaces, ankles and legs.

DETAILED DESCRIPTION OF THE INVENTION

[0013] A foot covering is identified herein as a clog sock **10** that provides a forefoot portion **12** of thin flexible material that readily covers a front portion of a wearer's foot **20** for ease of insertion into footwear lacking an enclosed heel. The clog sock **10** also provides heavy fabric material for covering an instep portion and back portion for covering from the wearer's heel to at least the ankle for warmth during cold weather, while minimizing stretching of an interior **14'** front portion of slide-on footwear **14**. The clog sock **10** includes a tubular shaped first fabric layer **30** covering the wearer's foot **20** from the toes **22** to the heel **46**. As illustrated in Figures 1 - 4, the first fabric layer **30** includes a toe portion **32**, a forefoot portion **34**, an instep portion **36** covering a wearer's medial arch **24**, upper surface of the instep **26** and outer side **28**, and further includes a heel base portion **42**. Along the upper surface of the instep portion **36**, a transition seam **38** is extended circumferentially over the sock instep **36** from the medial arch curve **24** to the outer portion **28** of the foot. The transition seam **38** does not extend laterally under the width of the sole **20'** of the wearer's foot **20**. The thin resiliently pliable material of the first fabric layer **30** covers the forefoot and sole portion of the wearer's foot **20** to maximize ease of insertion of the foot into a clog shoe **14**. The thin first fabric layer **30** minimizes stretching of an interior **14'** toe box of a slide-on shoe such as a clog shoe **14** (see Fig. 5), and minimizes stretching of forefoot straps **16'**, **16"** of a sandal **16** (see Fig. 6B). Those who prefer to wear quality clog shoes or sandals in cold and/or wet weather will have experienced unwanted stretching of interior portions of clog shoes or sandals when worn with thick wool socks having bulky forefoot and heel portions to keep the wearer's feet warm.

[0014] The first fabric layer **30** is composed of a thin material that is pliable, readily ventilated for transfer of moisture from the foot, and is resiliently stretchable when blended with an elastic material during production of the thin material. Any of the following materials commonly utilized in the production of socks can compose the first fabric layer **30**, including cotton, silk, nylon, acrylic fibers, polyester fibers, and/or polypropylene fiber materials. Those skilled in the art will recognize that comparable thin and pliable fabric materials can be utilized for the first fabric layer **30**, with a preference for materials providing a low coefficient of friction to assist insertion of the sock covered foot into footwear, and removal therefrom. The sock **10** is best utilized with footwear lacking an enclosed heel, such as clogs **14**, slippers, sandals **16**, and/or mule "slide-on" shoes. When worn with footwear lacking an enclosed heel, a thin heel base portion **42** encloses the bottom of the wearer's heel **46** to assure that the sock **10** will not easily slide off during walking. The thin heel base portion **42** enclosing the wearer's heel **46** further restrains the sock **10** from twisting during walking when the thin heel base portion **42** intermittently contacts a clog heel platform **14**" (see Fig. 5), or a heel portion **86** of a sandal **16** (see Fig. 6B).

[0015] The clog sock **10** provides a combination having a thin and readily ventilated front portion **32**, **34** of the first fabric material that is tailored in a tube shape by stitching along a toe seam **32'** (see Fig. 2), and by bonding with stitching, weaving or other means for connecting a second fabric material **40** to the first layer **30** along the width of the transition seam **38** along the forefoot portion **34**. The second fabric material **40** is composed of a knitted or woven second fabric material having a thickness greater than first fabric layer **30**, and is designed to

provide warmth for the user when covering the sides of the heel **46**, the ankle **48**, and portions of the lower leg **50** of the wearer (see Figs. 1 and 7 - 10). The second fabric material **40** is bonded to the thin first layer **30** at a lower inner and outer side edge **40'** which extends circumferentially to traverse the upper instep surface **36** as delineated by the transition seam **38**. The second fabric material **40** also extends laterally along each inner and outer side of the wearer's foot to form a rear edge **40"** that is bonded along the lower curved sides of the thin heel base portion **42** without the thick second fabric material extending underneath the wearer's heel **46**. When worn, the thick second fabric material **40** extends upwards to cover an ankle portion **44** extending upwards to a lower leg opening **44'**. One embodiment of the clog sock **10** includes a reinforced heel **48'** which can include an additional decorative heel portion with an alternative color or seam pattern (see Figs. 1 and 7 - 9).

[0016] The transition seam **38** of the sock **10** is disposed to extend laterally across the top or upper portion of the instep portion **36** of the first fabric layer **30**. When the clog sock **10** is worn, the transition seam **38** is positioned across the wearer's instep extending from the medial arch curve **24**, the upper instep **26** and the outer lateral side **28** of the wearer's foot. When worn with clog shoes **14**, the transition seam **38** is preferably disposed behind the trailing curved edge of the clog toe box. Further, the transition seam **38** does not extend underneath the foot sole **20'** when the sock **10** is properly worn, therefore the user will not experience a change in thickness of fabric material against the sole **20'** of his or her foot **20** during wear. One embodiment includes the first fabric layer **30** covering the sole **20'** of the wearer's foot **20** from his/her toes to a heel base portion **42** (see Fig. 4).

[0017] The second layer **40** of thick material extends distally from the transition seam **38** to cover at least an upper portion of the heel **46**, and preferably encircles the wearer's ankle **48**. The second layer **40** of fabric provides a thick material covering the wearer's instep **26**, sides of the heel **46** and ankle **48**, thereby providing warmth and/or support for each heel **46** and ankle **48** when worn with clogs **14**, slippers, sandals **16**, and/or mule "slide-on" shoes. The clog sock **10** includes the additional benefit of allowing the toes and forefoot portion of the wearer's foot to readily fit into a toe box portion of the "slip-on" footwear without stretching the toe box during wear in the fall, winter, and early spring seasons. Therefore, the toe box portion of the "slip-on" footwear is not stretched by wearing of other bulky, full-length socks. A tight and unstretched fit is maintained for clogs or sandals during wear indoors or wear during warm seasons.

[0018] The second layer of material is composed of materials including any of the following: wool blended with cotton fibers, wool blended with silk fibers, cotton blended with nylon fibers, wool blended with acrylic fibers, winter acrylic blended with hollow polyester fibers, polypropylene fibers blended with wool or cotton, and/or wool blended with elastic materials such as spandex. Other materials can readily be utilized as known to those skilled in the art of producing foot coverings that are woven and/or knitted for retainment of heat, release of moisture from the feet, and/or for enhancement of lower extremity circulation and muscle tissue support.

[0019] For people preferring to wear socks providing warmth for the upper portions of the foot, heel and ankle, but wanting a thin sock material covering the sole and lower curved sides of their feet, a clog sock **60** is provided as illustrated in

Figures 3 and 4. The sock **60** includes a first fabric layer **62** of thin, stretchable material forming a tubular forefoot portion **64** enclosing the wearer's toes **22**. The sock **60** includes an instep portion **66** and arch portion **66'** of thin, stretchable material extending to a heel base portion **72'** encircling the bottom of the wearer's heel **46**. A sole portion **72** of thin, stretchable material extends to cover the sole of the foot **20** to the heel base portion **72'** without any seams or overlapping thick material underneath the wearer's foot. The sock **60** provides a thick second layer **70** of material covering the wearer's upper instep **26** and sides of the heel **46** extending to a leading edge **76**. A back portion **74, 78** encircles the ankle **48** and back of heel **46** without covering the heel base **72'**. When a wearer of the clog sock **60** inserts his or her covered feet into clogs, slip-on mules, or sandals, the forefoot and sole of each foot are separated from an interior **14'** of each toe box by only a thin first fabric layer **62**, therefore minimizing stretching of the footwear.

[0020] The embodiment illustrated in Figures 3 and 4 includes an instep portion **66** having a transition seam **68** on which connecting materials such as woven stitching, or an alternative connecting materials such as hook and loop strips of material, are utilized to bind the sides of the lower edges **76** of the second layer **70** of thick materials against the first fabric layer **62** of thin materials. An alternative embodiment includes the second layer **70** formed into a sleeve of thick material that is sized to be slidably positioned over the forefoot portion of thin first fabric layer **62**. The sleeve of thick material is then moved past a person's instep **26** to be positioned around the wearer's heel **46** and ankle **48**. The second layer of fabric **70** provides a thick material covering the upper portion of the wearer's instep **26**, the upper portions of the heel **46** and ankle **48**, without having a lower

portion of thick material under the wearer's toes, arch or heel. The thin first fabric **62** forms the sole portion **72** of the sock **60** and extends to enclose the toes and forefoot portion **64**, the lower portion of the arch **66'**, and is extended to enclose the bottom of the heel up to the back of the heel **74**. An additional embodiment **70'** can include a pleated, woven or layered type of thick material covering the upper portion of the wearer's foot, including the instep **26**, heel **46**, ankle **48** and lower leg (see Fig. 5).

[0021] An alternative embodiment of the sock **80** further includes a split toe portion **88** providing a toe pocket **88'** for enclosing the wearer's big/great toe, and a separate toe enclosure **88"** for enclosing the lesser toes, thereby allowing for comfortable wearing of the sock **80** with thong sandals (see Fig. 6A and 6B). The split toe portion **88** includes a thin first fabric layer **82** having respective thin fabric portions covering toes, forefoot, lower instep sides, arch and heel. A second fabric layer **90** extends from the thin first fabric layer **82** along the upper surfaces of the instep and provides a thick layer of flexible material covering the medial instep portion **84**, the outer instep portion **84'**, the heel portion **86**, and the ankle portion **92** of the clog sock **80** (see Figs. 6A and 6B).

[0022] Additional embodiments are illustrated in Figures 7 - 9, illustrating the clog sock **110** having a second layer of thick material extended to a selected height above the wearer's ankle. Figure 8 illustrates the clog sock **210** having a second layer of thick material extending to a height of about the wearer's mid-calf portion of the leg. Figure 9 illustrates the clog sock **310** having a second layer of thick material extending to about the wearer's upper calf portion of the leg. The second layer of thick material is selected from a group consisting of wool, cotton,

layered silk, nylon, acrylic fibers, polyester fibers, polypropylene fibers, and/or elastic fibers. Each of the embodiments **110**, **210**, **310** can include an alternative design having the upper, thick material positioned as illustrated, and lacking a lower heel portion of thick material (see Figs. 3, 4, 6A and 6B).

5 **[0023]** An additional embodiment is illustrated in Figure 10 for a pair of lady's tights **410** having a thin layer of material covering the wearer's forefoot **412**, sole **422** and underneath the heel **442**. A second layer of thick material is bonded to cover the thin layer of material along the instep **436** and back of the heel **446**. The second layer of thick material is extended above at least the wearer's ankle **444**, and can extend upwards to cover the wearer's lower legs **450**, upper legs **452**, and waist **454** for extremely cold locations.

10 **[0024]** From the foregoing description, it will be recognized by those skilled in the art that a unique clog sock is provided having a forefoot portion of a first fabric layer **30** of thin, stretchable material, and having a second layer of fabric **40** of thick material extended to encircle the wearer's heel, ankle and lower calf while providing warmth and/or support for the wearer's heel, ankle, and lower calf.

15 **[0025]** While the present invention has been illustrated by description of several embodiments and while the illustrative embodiments have been described in considerable detail, it is not the intention of the applicant to restrict or in any way limit the scope of the appended claims to such detail. Additional advantages and modifications will readily appear to those skilled in the art. The invention in its broader aspects is therefore not limited to the specific details, representative apparatus and methods, and illustrative examples shown and described.

Accordingly, departures may be made from such details without departing from the spirit or scope of applicant's general inventive concept.